

# *International Journal of Man-Machine Studies*

**Volume 17, 1982**

*Executive Editors*

**B. R. Gaines and D. R. Hill**

*Editorial Board*

<b>J. H. Andreae</b>	<b>G. J. Klir</b>	<b>M. E. Sime</b>
<b>M. A. Arbib</b>	<b>V. A. Lvov</b>	<b>D. H. Sleeman</b>
<b>L. Bolc</b>	<b>E. H. Mamdani</b>	<b>R. D. Smallwood</b>
<b>J. S. Brown</b>	<b>T. P. Moran</b>	<b>I. Witten</b>
<b>J. L. Gedye</b>	<b>M. Nowakowska</b>	<b>K. L. Zinn</b>
<b>P. Hájek</b>	<b>G. Pask</b>	<b>P. I. Zorkoczy</b>
<b>J. Hatvany</b>	<b>B. Shackel</b>	
<b>W. Jassem</b>	<b>M. L. G. Shaw</b>	



**Academic Press**

*London New York San Francisco*

*A Subsidiary of Harcourt Brace Jovanovich, Publishers*

ISSN 0020-7373

## Contents of Volume 17

NUMBER 1, JULY 1982

Editorial . . . . .	1
<b>Gilbert, L. A.</b> Microelectronics in education: two types of innovation, two strategies . . . . .	3
<b>Thompson, V.</b> PRESTEL and education: a report of a one-year trial . . . . .	15
<b>Coates, J.</b> A pilot telesoftware service for education . . . . .	23
<b>Staisey, N. L., Tombaugh, J. W. and Dillon, R. F.</b> Videotex and the disabled . . . . .	33
<b>Odor, P.</b> Microcomputers and disabled people . . . . .	51
<b>Terrell, C. D. and Linyard, O.</b> Evaluation of electronic learning aids: Texas Instruments' "Speak Spell" . . . . .	59
<b>Pask, G.</b> SAKI: Twenty-five years of adaptive training into the microprocessor era . . . . .	69
<b>Shaw, M. L. G. and Gaines, B. R.</b> Tracking the creativity cycle with a microcomputer . . . . .	75
<b>Weyer, S. A.</b> The design of a dynamic book for information search . . . . .	87
<b>Gould, L. and Finzer, W.</b> A study of TRIP: a computer system for animating time-rate-distance problems . . . . .	109
<b>Hartley, J. R. and Bostrom, K.</b> An evaluation of micro-CAL in schools . . . . .	127
<b>Mills, G. M. and Stonier, T. T.</b> Trends and prospects for computer-based education . . . . .	143
Announcement . . . . .	149

NUMBER 2, AUGUST 1982

<b>Addis, T. R.</b> Knowledge refining for a diagnostic aid (an example of applied Epistemics) . . . . .	151
<b>Smith, C. H. and Dunsmore, H. E.</b> On the relative comprehensibility of various control structures by novice Fortran programmers . . . . .	165
<b>Caio, F., Guida, G. and Somalvico, M.</b> Problem solving as a basis for program synthesis: design and experimentation of the BIS system . . . . .	173
<b>Lee, M. H. and Marudarajan, A. R.</b> A computer package for the evaluation of neuron models involving large uniform networks . . . . .	189
<b>Arblaster, A.</b> Human factors in the design and use of computing languages . . . . .	211
<b>Shackel, B.</b> Plans and initial progress with BLEND—an electronic network communication experiment . . . . .	225
Book reviews . . . . .	235

NUMBER 3, OCTOBER 1982

<b>Editorial</b>	239
<b>Wedgwood, J.</b> The Automated Pictorial Paired and Associate Learning Task	241
<b>Elithorn, A., Mornington, S. and Stavrou, A.</b> Automated psychological testing: some principles and practice	247
<b>Ridgway, J., MacCulloch, M. J. and Mills, H. E.</b> Some experiences in administering a psychometric test with a light pen and microcomputer	265
<b>Thompson, J. A. and Wilson, S. L.</b> Automated Psychological Testing	279
<b>Wilson, S. L., Thompson, J. A. and Wylie, G.</b> Automated Psychological Testing for the severely physically handicapped	291
<b>Carr, A. C., Wilson, S. L., Ghosh, A., Ancill, R. J. and Woods, R. T.</b> Automated testing of geriatric patients using a microcomputer-based system	297
<b>Volans, P. J.</b> Pros and cons of tailored testing: an examination of issues highlighted by experience with an automated testing system	301
<b>Calvert, E. J. and Waterfall, R. C.</b> A comparison of conventional and automated administration of Raven's Standard Progressive Matrices	305
<b>Beaumont, J. G.</b> System requirements for interactive testing	311
<b>Weinman, J. A.</b> Detailed computer analysis of performance on a single psychological test	321
<b>Watts, K., Baddeley, A. and Williams, M.</b> Automated tailored testing using Raven's Matrices and the Mill Hill Vocabulary tests: a comparison with manual administration	331
<b>Shaw, M. L. G.</b> PLANET: some experience in creating an integrated system for repertory grid applications on a microcomputer	345
<b>Acker, W.</b> A computerized approach to psychological screening—the Bexley-Maudsley Automated Psychological Screening and the Bexley-Maudsley Category Sorting Test	361
<b>Call for papers</b>	371

NUMBER 4, NOVEMBER 1982

<b>Editorial</b>	373
<b>Lang, K., Auld, R. and Lang, T.</b> The goals and methods of computer users	375
<b>Giles, R.</b> Semantics for fuzzy reasoning	401
<b>Guida, G. and Tasso, C.</b> NLI: a robust interface for natural language person-machine communication	417
<b>Barker, P. G.</b> Data base interaction using a hand print terminal	435
<b>Companion, M. A. and Corso, G. M.</b> Task taxonomies: a general review and evaluation	459
<b>Call for papers</b>	473

Copyright © 1982 by Academic Press Inc. (London) Ltd.

**ALL RIGHTS RESERVED**

No part of this volume may be reproduced in any  
form, by photostat, microfilm, or any other means,  
without written permission from the publishers.

Printed in Great Britain